

STATE OF SOUTH DAKOTA CLASS SPECIFICATION

Class Title: Heating Plant Technician

Class Code: 80253

A. Purpose:

Operates, maintains and repairs coal-fired boilers and related equipment at a central heating plant to ensure an efficient heating plant operation.

B. Distinguishing Feature:

Heating Plant Technician exists only in coal-fired heating plants. This position maintains firing conditions by continually operating and adjusting equipment without the aide of automatic control devices found on gas and oil boilers.

Heating Plant Operators monitor the automated operation of heating plants.

C. Functions:

(These are examples only; any one position may not include all of the listed examples nor do the listed examples include all functions that may be found in positions of this class.)

1. Operates and maintains coal-fired boilers and related equipment to ensure steam load needs are met in a safe and efficient manner.
2. Repairs and maintains coal-fired boilers and related equipment by disassembling and reassembling boiler systems, mechanized coal-handling systems, and pumps and boiler operated control systems to minimize the amount of system downtimes and maximize combustion efficiency.
3. Operates, controls, and maintains coal supply, coal storage and coal handling equipment to ensure a constant supply of coal for boiler operation.
4. Operates, controls, and maintains ash handling and ash storage systems to provide or proper operation of coal-fired boilers.
5. Operates alternate fuel boilers to ensure heating plant operation during non-peak and emergency situations.
6. Logs data and calculates operating efficiencies to determine if adjustments are required for proper and efficient boiler operations and to maintain accurate operating records.
7. Monitors and adjusts boiler chemical treatment systems, performs coal analysis and runs related chemical tests on water, feedwater and condensate return to ensure system is operating correctly.
8. Performs other work as assigned.

D. Reporting Relationships:

Typically the incumbent does not supervise.

E. Challenges and Problems:

Challenged to maintain a proper fuel/oxygen mixture to obtain an optimum balance between operating efficiency and stack emissions of a coal-fired heating plant. This requires constant attention and adjustment because of the varying coal, temperatures, loads and ash bed conditions; independently assess equipment and operating problems and determine the most efficient operating or repair alternatives with minimum fuel and repair costs.

Typical problems include high water, loss of electrical power and frozen coal that may cause or lead to plant shutdown if corrective action is not taken immediately.

F. Decision-making Authority:

Decisions made include making coal feed, fan and coal stoker adjustments; making adjustments to related equipment associated with coal handling, coal burning, ash handling and other coal fired boiler equipment; and making emergency repairs and emergency boiler changes while firing boilers during assigned shifts.

Decisions referred include determining when to switch from one boiler to another unless during an emergency situation; maintenance and repair schedules; and when to prepare for state or insurance industry inspections.

G. Contact with Others:

Daily contact with security personnel to obtain data and weather reports and with various heating plant personnel to exchange information on heating plant operations.

H. Working Conditions:

The incumbent is exposed to coal and ash dust, chemicals, high-pressure steam, extremely hot water and extensive mechanical moving equipment and is required to work in an environment of extreme heat or extreme cold. The possibility of serious burns is a daily hazard.

I. Knowledge, Skills and Abilities:

Knowledge of:

- coal-fired heating plant operations;
- the methods, tools and equipment used in maintaining and repairing coal-fired heating plant equipment;
- the principles of thermodynamics in coal-fired heating plants;
- boiler water chemistry and required chemical treatment programs;
- appropriate safety precautions.

Ability to:

- maintain operating records including the calculation of boiler combustion efficiency;
- undersigned the interaction of fuel source, system demand, stack emission limits, fuel costs and other variables related to coal-fired heating plant operations.